

1 **WHAT IS CLAIMED IS:**

2 1. A sterilizing air filter comprising:

3 a casing having

4 a top;

5 a bottom;

6 a sidewall;

7 an inlet formed in the casing; and

8 an outlet formed in the casing;

9 a base mounted in the casing and having

10 multiple chambers defined in the base;

11 multiple spray devices respectively mounted in the chambers and each

12 having

13 an electric pump mounted in a corresponding chamber and having a

14 top; and

15 a flat filter mounted on the top of the electric pump;

16 a cover mounted on the base and having

17 a plate covering the base;

18 multiple holes formed in the plate and each multiple hole having a

19 periphery;

20 multiple connecting tubes formed integrally and extended upward

21 from the plate and respectively around the peripheries of the holes; and

22 multiple tubular filters each having a proximal end and a distal end,

23 wherein the proximal end of each tubular filter is connected around the periphery

24 of a corresponding hole and the distal end of each tubular filter is mounted

1 around one of the spray devices in the chamber of the base;
2 multiple fans respectively mounted in the connecting tubes; and
3 multiple bent tubes respectively mounted with the connecting tubes on
4 the plate of the cover and two of the bent tubes corresponding to the inlet in the
5 casing and the outlet in the casing.

6 2. The sterilizing air filter as claimed in claim 1, wherein the inlet is
7 formed through the sidewall of the casing and the outlet is formed through the
8 top of the casing.

9 3. The sterilizing air filter as claimed in claim 2, wherein
10 the base has two chambers named first chamber and second chamber;
11 the sterilizing air filter has two spray devices and one is mounted in the
12 first chamber and the other is mounted in the second chamber; and
13 the cover has four holes, two holes are corresponded with the first
14 chamber of the base and the other two holes are corresponded with the second
15 chamber of the base and two tubular filters are respectively connected with two
16 of the holes that are corresponded respectively with the first and second
17 chambers of the base.

18 4. The sterilizing air filter as claimed in claim 3, wherein the sterilizing
19 air filter has three bent tubes are respectively named first bent tube, second bent
20 tube and third bent tube;

21 the first bent tube has a proximal end and a distal end and the proximal
22 end of the first bent tube is connected with the connecting tube that has the
23 tubular filter mounted corresponding to the first chamber of the base and the
24 distal end of the first bent tube is mounted corresponding to the inlet in the

1 casing;

2 the second bent tube has a proximal end and a distal end and the
3 proximal end of the second bent tube is connected with the connecting tube
4 without a tubular filter mounted corresponding to the first chamber and the distal
5 end of the second bent tube is connected with the connecting tube that has the
6 tubular filter mounted corresponding to the second chamber; and

7 the third bent tube has a proximal end and a distal end and the proximal
8 end of the third bent tube is connected with the connecting tube without a tubular
9 filter mounted corresponding to the second chamber and the distal end of the
10 third bent tube is mounted corresponding to the outlet in the casing.

11 5. The sterilizing air filter as claimed in claim 4, wherein each spray
12 device further comprises a spray head mounted on the flat filter and connected
13 with the top of the electric pump.

14 6. The sterilizing air filter as claimed in claim 5, wherein the cover
15 further comprises multiple setting tubes formed integrally with and extended
16 downward from the plate and the peripheries of the holes and the tubular filters
17 are respectively mounted around the setting tubes.

18 7. The sterilizing air filter as claimed in claim 6, wherein the casing
19 further comprises an opening formed in the sidewall and a plate covers the
20 opening.